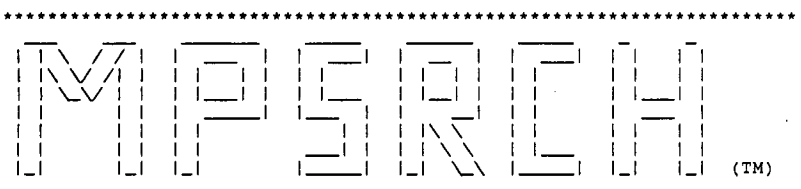

Release 2.1D John F. Collins, Biocomputing Research Unit.

MPsrch_pp protein - protein database search, using Smith-Waterman algorithm

on: Wed Aug 20 09:52:47 1997; MasPar time 19.04 Seconds
576.613 Million cell updates/sec

Tabular output not generated.

Title: >US-08-469-637A-2
Description: (22-401) from US08469637A.pep (2 of 2)
Perfect Score: 2861
Sequence: 1 ETFPPKYLHYDEETSHQLLC.....QKLFLEMIGNQVQSVKISCL 380

Scoring table: PAM 150
Gap 11

Searched: 91006 seqs, 28888923 residues

Post-processing: Minimum Match 0%
Listing first 45 summaries

Database: pir51
1:ann1 2:ann2 3:ann3 4:ann4 5:unann1 6:unann2 7:unann3
8:unann4 9:unann5 10:unann6 11:unann7 12:unann8
13:unann9 14:unann10 15:unenc 16:unrev

Statistics: Mean 46.240; Variance 103.115; scale 0.448

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description	Pred. No.
1	398	13.9	461	6	A35356	tumor necrosis facto	7.85e-47
2	377	13.2	459	14	I48854	gene murine tumour n	3.33e-43
3	375	13.1	474	6	B38634	tumor necrosis facto	7.36e-43
4	303	10.6	277	13	A60771	B-cell activation pr	1.19e-30
5	294	10.3	289	14	A46515	B cell-associated su	3.73e-29
6	294	10.3	305	14	A46476	CD40 - mouse	3.73e-29
7	269	9.4	326	2	GQVZML	T2 protein - myxoma	4.86e-25
8	260	9.1	325	6	B43692	T2 protein - rabbit	1.41e-23
9	260	9.1	435	13	I54182	tumor necrosis facto	1.41e-23
10	230	8.0	138	16	S32385	gene G4R protein - v	8.98e-19
11	230	8.0	349	8	D36858	G4R protein - variol	8.98e-19
12	221	7.7	454	14	I57826	tumor necrosis facto	2.33e-17
13	221	7.7	454	2	GQMST1	tumor necrosis facto	2.33e-17
14	220	7.7	461	2	GQRTT1	tumor necrosis facto	3.34e-17
15	215	7.5	416	6	JN0006	nerve growth factor	2.01e-16
16	213	7.4	427	2	GQHUN	nerve growth factor	4.11e-16
17	207	7.2	425	6	A26431	nerve growth factor	3.47e-15
18	186	6.5	461	14	JC4302	tumor necrosis facto	5.33e-12
19	178	6.2	595	13	A42086	CD30 antigen precurs	8.20e-11
20	172	6.0	455	2	GQHUT1	tumor necrosis facto	6.21e-10
21	162	5.7	260	2	A46517	CD27 antigen precurs	1.72e-08
22	159	5.6	256	14	B32393	T-cell antigen 4-1BB	4.60e-08
23	154	5.4	324	14	JC2395	Fas antigen - rat	2.33e-07
24	146	5.1	271	14	S12783	OX40 antigen precurs	3.01e-06
25	144	5.0	272	14	I48700	gene ox40 protein -	5.65e-06
26	141	4.9	255	13	JT0752	lymphocyte activatio	1.44e-05
27	140	4.9	335	13	A38142	APO-1 antigen, Fas a	1.97e-05
28	137	4.8	327	14	A46484	apoptosis-mediating	4.98e-05
29	134	4.7	250	2	A49053	CD27 antigen precurs	1.25e-04
30	134	4.7	314	13	I37383	FAS soluble protein	1.25e-04
31	134	4.7	335	13	A40036	apoptosis-mediating	1.25e-04
32	124	4.3	103	8	JQ1791	SalF16R protein - va	2.48e-03
33	124	4.3	103	8	A42523	A53R protein - vacci	2.48e-03
34	115	4.0	360	11	S48365	hypothetical protein	3.31e-02
35	110	3.8	535	11	B34576	D2 protein precursor	1.33e-01
36	105	3.7	2813	3	VWHU	von Willebrand facto	5.14e-01
37	103	3.6	344	11	S61037	hypothetical protein	8.74e-01
38	104	3.6	614	12	S43427	intermediate filamen	6.71e-01
39	102	3.6	3084	3	MMMSA	laminin chain A prec	1.14e+00
40	100	3.5	132	13	S57566	Fas/Apo-1/CD95 prote	1.91e+00
41	100	3.5	149	13	S58662	Fas-Delta-(4,7) prot	1.91e+00
42	101	3.5	713	11	JC6012	glutamine--fructose-	1.47e+00
43	101	3.5	1122	12	S64443	probable membrane pr	1.47e+00
44	100	3.5	2677	13	A38194	desmoplakin I - huma	1.91e+00
45	98	3.4	1947	3	S05697	myosin heavy chain C	3.19e+00

ALIGNMENTS

RESULT 1
ENTRY A35356 #type complete
TITLE tumor necrosis factor receptor type 2 precursor - human
ALTERNATE_NAMES 75K tumor necrosis factor receptor
ORGANISM #formal_name Homo sapiens #common_name man
DATE 14-Sep-1990 #sequence_revision 14-Sep-1990 #text_change 22-Nov-1996
ACCESSIONS A35356; A36475; A48416; A36007; A23666; B35010; I38094
REFERENCE A35356
#authors Smith, C.A.; Davis, T.; Anderson, D.; Solam, L.; Beckmann, M.P.; Jerzy, R.; Dower, S.K.; Cosman, D.; Goodwin, R.G.
#journal Science (1990) 248:1019-1023
#title A receptor for tumor necrosis factor defines an unusual family of cellular and viral proteins.
#cross-references MUID:90260639
#accession A35356
##status preliminary
##molecule_type mRNA
##residues 1-461 ##label SMI
##cross-references GB:M32315
REFERENCE A36475
#authors Kohno, T.; Brewer, M.T.; Baker, S.L.; Schwartz, P.E.; King, M.W.; Hale, K.K.; Squires, C.H.; Thompson, R.C.; Vannice, J.L.
#journal Proc. Natl. Acad. Sci. U.S.A. (1990) 87:8331-8335
#title A second tumor necrosis factor receptor gene product can shed a naturally occurring tumor necrosis factor inhibitor.
#cross-references MUID:91045991
#accession A36475
##status preliminary
##molecule_type mRNA
##residues 1-195,'R',197-461 ##label KOH
##cross-references GB:M38549
REFERENCE A48416
#authors Dembic, Z.; Loetscher, H.; Gubler, U.; Pan, Y.C.; Lahm, H.W.; Gentz, R.; Brockhaus, M.; Lesslauer, W.
#journal Cytokine (1990) 2:231-237
#title Two human TNF receptors have similar extracellular, but distinct intracellular, domain sequences.
#cross-references MUID:91370690
#accession A48416
##status preliminary
##molecule_type mRNA; protein
##residues 23-461 ##label DEM
##cross-references NCBIN:63368; NCBIP:63371

```
     ##note          sequence extracted from NCBI backbone
REFERENCE        A36007
   #authors      Heller, R.A.; Song, K.; Onasch, M.A.; Fischer, W.H.; Chang,
                   D.; Ringold, G.M.
   #journal      Proc. Natl. Acad. Sci. U.S.A. (1990) 87:6151-6155
   #title        Complementary DNA cloning of a receptor for tumor necrosis
                   factor and demonstration of a shed form of the receptor.
   #cross-references MUID:90349572
   #accession    A36007
      ##status        preliminary
      ##molecule_type mRNA
      ##residues      116-140,'P',142-195,'R',197-362,'T',364-461 ##label HEL
      ##cross-references GB:M35857
REFERENCE        A23666
   #authors      Loetscher, H.; Schlaeger, E.J.; Lahm, H.W.; Pan, Y.C.E.;
                   Lesslauer, W.; Brockhaus, M.
   #journal      J. Biol. Chem. (1990) 265:20131-20138
   #title        Purification and partial amino acid sequence analysis of two
                   distinct tumor necrosis factor receptors from HL60 cells.
   #cross-references MUID:91056048
    accession    A23666
      ##status        preliminary
      ##molecule_type protein
      ##residues      23-40;65-69;136-141;300-306 ##label LOE
REFERENCE        A35010
   #authors      Engelmann, H.; Novick, D.; Wallach, D.
   #journal      J. Biol. Chem. (1990) 265:1531-1536
   #title        Two tumor necrosis factor-binding proteins purified from
                   human urine. Evidence for immunological cross-reactivity
                   with cell surface tumor necrosis factor receptors.
   #cross-references MUID:90110215
   #accession    B35010
      ##status        preliminary
      ##molecule_type protein
      ##residues      27-31 ##label ENG
REFERENCE        I38094
   #authors      Kuhnert, P.; Kemper, O.; Wallach, D.
   #journal      Gene (1994) 150:381-386
   #title        Cloning, sequencing and partial functional characterization
                   of the 5' region of the human p75 tumor necrosis factor
                   receptor-encoding gene (TNF-R).
   #cross-references MUID:95121934
   #accession    I38094
      ##status        preliminary; translated from GB/EMBL/DDBJ
      ##molecule_type DNA
      ##residues      1-37 ##label RES
      ##cross-references EMBL:X80021; NID:g666044; CDS_PID:g825701
GENETICS
    gene         GDB:TNFR2
      ##cross-references GDB:125914
   #map_position 1p36.2-1p36.2
   #introns      26/3
   #note         the list of introns is incomplete
CLASSIFICATION   #superfamily tumor necrosis factor receptor type 2; NGF
                   receptor repeat homology
KEYWORDS         duplication; receptor; transmembrane protein
FEATURE
   1-22               #domain signal sequence #status predicted #label SIG\
   23-416             #product tumor necrosis factor receptor type 2 #status
                        experimental #label MAT\
   40-76              #domain NGF receptor repeat homology #label NG1\
   78-119             #domain NGF receptor repeat homology #label NG2\
   120-162            #domain NGF receptor repeat homology #label NG3\
   164-201            #domain NGF receptor repeat homology #label NG4\
   262-279            #domain transmembrane #status predicted #label TMN\
   280-461            #domain intracellular #status predicted #label INT\
   171,193            #binding_site carbohydrate (Asn) (covalent) #status
                        predicted
SUMMARY          #length 461  #molecular-weight 48291  #checksum 5724

  Query Match           13.9%;  Score 398;  DB 6;  Length 461;
  Best Local Similarity  43.8%;  Pred. No. 7.85e-47;
  Matches    63;  Conservative   19;  Mismatches  55;  Indels   7;  Gaps   6;

Db      45 yydqta-qmccskcspgqhakvfctktsdtvcdscedstytqlwnwvpeclscgsrcssd 103
           |  ::|: |: | ||:||    |  ||    ||| :| |  ||: |:   ||| |:: |
Qy      31 YDEETSHQLLCDKCPPGTYLKQHCTAKWKTVCAPCPDHYYTDSWHTSDECLYCSPVCKEL 90

Db     104 qvetqactreqnrictcrpgwycalskqegcrlcaplrkcrpgfgvarpgtetsdvvckp 163
           |   | | | :||:| |: |:|  |   | | |    | | |||||| ::||   : |||
Qy      91 QYVKQECNRTHNRVCECKEGRY--LEI-EFC-L-KH-RSCPPGFGVVQAGTPERNTVCKR 144

Db     164 capgtfsnttsstdicrphqicnv 187
           |: | ||| |||   || |  |:|
Qy     145 CPDGFFSNETSSKAPCRKHTNCSV 168


RESULT    2
ENTRY            I48854     #type fragment
TITLE            gene murine tumour necrosis factor receptor 2 protein - mouse
                   (fragment)
ORGANISM         #formal_name Mus musculus #common_name house mouse
DATE             02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change
                   02-Jul-1996
ACCESSIONS       I48854
REFERENCE        I48854
   #authors      Powell, E.E.; Wicker, L.S.; Peterson, L.B.; Todd, J.A.
   #journal      Mamm. Genome (1994) 5:726-727
   #title        Allelic variation of the type 2 tumor necrosis factor
                   receptor gene.
   #cross-references MUID:95178848
   #accession    I48854
      ##status        preliminary; translated from GB/EMBL/DDBJ
      ##molecule_type mRNA
      ##residues      1-459 ##label RES
      ##cross-references EMBL:X76401; NID:g433830; CDS_PID:g433831
GENETICS
   #note         gene name murine tumour necrosis factor receptor 2
SUMMARY          #length 459  #checksum 3156

  Query Match           13.2%;  Score 377;  DB 14;  Length 459;
  Best Local Similarity  41.5%;  Pred. No. 3.33e-43;
  Matches    66;  Conservative   21;  Mismatches  61;  Indels  11;  Gaps   7;

Db      37 qmccakcppgqyvkhfcnktsdtvcadceasmytqvwnqfrtclscssscstdqvetrac 96
           |: | |||| |:|: |     |||| |    ||: |:    || ||: |   |   : |
Qy      38 QLLCDKCPPGTYLKQHCTAKWKTVCAPCPDHYYTDSWHTSDECLYCSPVCKELQYVKQEC 97

Db      97 tkqqnrvcaceagrycalkthsgscrqcmrlskcgpgfgvassrapngnvlckacapgtf 156
           : :|||| |  |||  |       |    | | | |||||  : :|: | :|| |: | |
Qy      98 NRTHNRVCECKEGRY--LEIEF--CLKH-R-S-CPPGFGVVQAGTPERNTVCKRCPDGFF 150

Db     157 sdttsstdvcrphricsi--laip--gnastdavcapes 191
           |: |||   || |  ||:  | :   |||: | :|: :|
Qy     151 SNETSSKAPCRKHTNCSVFGLLLTQKGNATHDNICSGNS 189


RESULT    3
ENTRY            B38634     #type complete
TITLE            tumor necrosis factor receptor type 2 precursor - mouse
ORGANISM         #formal_name Mus musculus #common_name house mouse
DATE             30-Jun-1992 #sequence_revision 30-Jun-1992 #text_change
                   18-Oct-1996
ACCESSIONS       B38634; A40254; S54816
REFERENCE        A38634
   #authors      Lewis, M.; Tartaglia, L.A.; Lee, A.; Bennett, G.L.; Rice,
                   G.C.; Wong, G.H.W.; Chen, E.Y.; Goeddel, D.V.
   #journal      Proc. Natl. Acad. Sci. U.S.A. (1991) 88:2830-2834
   #title        Cloning and expression of cDNAs for two distinct murine tumor
                   necrosis factor receptors demonstrate one receptor is
                   species specific.
   #cross-references MUID:91187885
   #accession    B38634
      ##molecule_type mRNA
      ##residues      1-474 ##label LEW
      ##cross-references GB:M60469
```

```
REFERENCE        A40254
   #authors      Goodwin, R.G.; Anderson, D.; Jerzy, R.; Davis, T.; Brannan,
                   C.I.; Copeland, N.G.; Jenkins, N.A.; Smith, C.A.
   #journal      Mol. Cell. Biol. (1991) 11:3020-3026
   #title        Molecular cloning and expression of the type 1 and type 2
                   murine receptors for tumor necrosis factor.
   #cross-references MUID:91246168
   #accession    A40254
      ##molecule_type mRNA
      ##residues      1-474 ##label GOO
      ##cross-references GB:M60469
REFERENCE        S54816
   #authors      Kissonerghis, M.; Fellowes, R.; Feldmann, M.; Chernajovsky,
                   Y.
   #submission   submitted to the EMBL Data Library, May 1995
   #description  Characterization of the promoter region of the murine p75-TNF
                   receptor.
   #accession    S54816
      ##status        preliminary
      ##molecule_type DNA
      ##residues      1-22 ##label KIS
      ##cross-references EMBL:X87128
CLASSIFICATION   #superfamily tumor necrosis factor receptor type 2; NGF
                   receptor repeat homology
FEATURE
   1-22               #domain signal sequence #status predicted #label SIG\
   23-474             #product tumor necrosis factor receptor type 2 #status
                        predicted #label MAT\
   40-77              #domain NGF receptor repeat homology #label NG1\
   79-120             #domain NGF receptor repeat homology #label NG2\
   166-203            #domain NGF receptor repeat homology #label NG4
SUMMARY          #length 474  #molecular-weight 50319  #checksum 7767

  Query Match            13.1%;  Score 375;  DB 6;  Length 474;
  Best Local Similarity  41.5%;  Pred. No. 7.36e-43;
  Matches    66;  Conservative   21;  Mismatches  61;  Indels  11;  Gaps   7;

Db      52 qmccakcppgqyvkhfcnktsdtvcadceasmytqvwnqfrtclscsssscttdqveirac 111
           |: | ||||| |:|: |    ||||  |    ||: |:    || ||: |   |   : |
Qy      38 QLLCDKCPPGTYLKQHCTAKWKTVCAPCPDHYYTDSWHTSDECLYCSPVCKELQYVKQEC 97

Db     112 tkqqnrvcaceagrycalkthsgscrqcmrlskcgpgfgvassrapngnvlckacapgtf 171
           : :|||| |  ||| |      |    | | |||||  : :|: | :|| |: | |
Qy      98 NRTHNRVCECKEGRY--LEIEF--CLKH-R-S-CPPGFGVVQAGTPERNTVCKRCPDGFF 150

Db     172 sdttsstdvcrphricsi--laip--gnastdavcapes 206
           |: |||   || |  ||:  | :   |||: | :|: :|
       151 SNETSSKAPCRKHTNCSVFGLLLTQKGNATHDNICSGNS 189


RESULT    4
ENTRY            A60771     #type complete
TITLE            B-cell activation protein CD40 precursor - human
ALTERNATE_NAMES  B-cell surface antigen Bp50
ORGANISM         #formal_name Homo sapiens #common_name man
DATE             03-Jun-1993 #sequence_revision 03-Feb-1994 #text_change
                   06-Sep-1996
ACCESSIONS       S04460; A60771
REFERENCE        S04460
   #authors      Stamenkovic, I.; Clark, E.A.; Seed, B.
   #journal      EMBO J. (1989) 8:1403-1410
   #title        A B-lymphocyte activation molecule related to the nerve
                   growth factor receptor and induced by cytokines in
                   carcinomas.
   #cross-references MUID:89356608
   #accession    S04460
      ##molecule_type mRNA
      ##residues      1-277 ##label STA
      ##cross-references EMBL:X60592
REFERENCE        A60771
   #authors      Braesch-Andersen, S.; Paulie, S.; Koho, H.; Nika, H.;
                   Aspenstroem, P.; Perlmann, P.
   #journal      J. Immunol. (1989) 142:562-567
   #title        Biochemical characteristics and partial amino acid sequence
                   of the receptor-like human B cell and carcinoma antigen
                   CDw40.
   #accession    A60771
      ##molecule_type protein
      ##residues      21-50 ##label BRA
      ##experimental_source Burkitt lymphoma cell line Raji
GENETICS
   #gene         GDB:CD40
      ##cross-references GDB:215268
   #map_position 20q12-20q13.2
KEYWORDS         B-cell; glycoprotein; phosphoprotein; transmembrane protein
FEATURE
   1-20               #domain signal sequence #status predicted #label SIG\
   21-277             #product B-cell activation protein CD40 #status
                        experimental #label MAT\
   21-193             #domain extracellular #status predicted #label EXT\
   194-215            #domain transmembrane #status predicted #label TMM\
   216-277            #domain intracellular #status predicted #label CYT\
   153,180            #binding_site carbohydrate (Asn) (covalent) #status
                        predicted
SUMMARY          #length 277  #molecular-weight 30619  #checksum 6261

  Query Match            10.6%;  Score 303;  DB 13;  Length 277;
  Best Local Similarity  36.8%;  Pred. No. 1.19e-30;
  Matches    56;  Conservative   21;  Mismatches  67;  Indels   8;  Gaps   7;

Db      38 cslcqpgqklvsdcteftetеclpcgesefldtwnrethchqhkycdpn-lglr-vqqkg 95
           |  | ||  |   ||    | | || :  : |:|:    |    || |    |: | |
Qy      41 CDKCPPGTYLKQHCTAKWKTVCAPCPDHYYTDSWHTSDEC-L--YCSPVCKELQYVKQEC 97

Db      96 tsetdtictceegwhctseacescvlhrscspgfgvkqiatgvsdticepcpvgffsnvs 155
              : :| | ||:.   |  | |: ||||:||||| | :|   :|:|  || ||||| :
Qy      98 NRTHNRVCECKEGRY-L-EI-EFCLKHRSCPPGFGVVQAGTPERNTVCKRCPDGFFSNET 154

Db     156 safekchpwtscetkdlvvqqagtnktdvvcg 187
           |:   |:  |:|    |:: | |    | :|:
Qy     155 SSKAPCRKHTNCSVFGLLLTQKGNATHDNICS 186


RESULT    5
ENTRY            A46515     #type complete
TITLE            B cell-associated surface molecule CD40 - mouse
ORGANISM         #formal_name Mus musculus #common_name house mouse
DATE             18-Jun-1993 #sequence_revision 18-Nov-1994 #text_change
                   03-Mar-1995
ACCESSIONS       A46515
REFERENCE        A46515
   #authors      Grimaldi, J.C.; Torres, R.; Kozak, C.A.; Chang, R.; Clark,
                   E.A.; Howard, M.; Cockayne, D.A.
   #journal      J. Immunol. (1992) 149:3921-3926
   #title        Genomic structure and chromosomal mapping of the murine CD40
                   gene.
   #cross-references MUID:93094586
   #accession    A46515
      ##status        preliminary; not compared with conceptual translation
      ##molecule_type nucleic acid
      ##residues      1-289 ##label GRI
      ##cross-references NCBIP:120357
      ##experimental_source BALB/c, liver
      ##note          sequence extracted from NCBI backbone
SUMMARY          #length 289  #molecular-weight 32111  #checksum 579

  Query Match            10.3%;  Score 294;  DB 14;  Length 289;
  Best Local Similarity  38.8%;  Pred. No. 3.73e-29;
  Matches    59;  Conservative   20;  Mismatches  65;  Indels   8;  Gaps   6;

Db      38 cdlcqpgsrltshctalektqchpcdsgefsaqwnreirchqhrhcepn-qglr-vkkeg 95
           || | ||: |  ||||  || | ||    ::  |:    |     | |    |: || |
Qy      41 CDKCPPGTYLKQHCTAKWKTVCAPCPDHYYTDSWHTSDEC-LY--CSPVCKELQYVKQEC 97

Db      96 taesdtvctckeqqhctskdceacaqhtpcipgfgvmematettdtvchpcpvgffsnqs 155
              : || ||||:     : | |  | :| |||||:: :|   :|||  || ||||||::
```

```
Qy      98 NRTHNRVCECKEGRY-L--EIEFCLKHRSCPPGFGVVQAGTPERNTVCKRCPDGFFSNET 154

Db     156 slfekcypwtscedknlevlqkgtsqtnvicg 187
           |    |   |:|    | : ||| :  : ||:
Qy     155 SSKAPCRKHTNCSVFGLLLTQKGNATHDNICS 186


RESULT    6
ENTRY            A46476     #type complete
TITLE            CD40 - mouse
ORGANISM         #formal_name Mus musculus #common_name house mouse
DATE             18-Jun-1993 #sequence_revision 18-Nov-1994 #text_change
                   18-Nov-1994
ACCESSIONS       A46476
REFERENCE        A46476
   #authors      Torres, R.M.; Clark, E.A.
   #journal      J. Immunol. (1992) 148:620-626
   #title        Differential increase of an alternatively polyadenylated mRNA
                   species of murine CD40 upon B lymphocyte activation.
   #cross-references MUID:92105763
   #accession    A46476
      ##status        preliminary
      ##molecule_type mRNA
      ##residues      1-305 ##label TOR
      ##cross-references NCBIN:75206; NCBIP:75207
      ##note          sequence extracted from NCBI backbone
SUMMARY          #length 305  #molecular-weight 33617  #checksum 5203

  Query Match           10.3%;  Score 294;  DB 14;  Length 305;
  Best Local Similarity  38.8%;  Pred. No. 3.73e-29;
  Matches    59;  Conservative   20;  Mismatches  65;  Indels   8;  Gaps   6;

Db      38 cdlcqpgsrltshctalektqchpcdsgefsaqwnreirchqhrhcepn-qglr-vkkeg 95
           || | ||: |  |||| || | ||    ::  |:    |     | |    |: || |
Qy      41 CDKCPPGTYLKQHCTAKWKTVCAPCPDHYYTDSWHTSDEC-LY--CSPVCKELQYVKQEC 97

Db      96 taesdtvctckegqhctskdceacaqhtpcipgfgvmematettdtvchpcpvgffsnqs 155
              : || ||||:     : | |  | :| |||||:: :|   :|||  || ||||||::
Qy      98 NRTHNRVCECKEGRY-L--EIEFCLKHRSCPPGFGVVQAGTPERNTVCKRCPDGFFSNET 154

Db     156 slfekcypwtscedknlevlqkgtsqtnvicg 187
           |    |   |:|    | : ||| :  : ||:
Qy     155 SSKAPCRKHTNCSVFGLLLTQKGNATHDNICS 186


RESULT    7
ENTRY            GQVZML     #type complete
TITLE            T2 protein - myxoma virus (strain Lausanne)
ORGANISM         #formal_name myxoma virus
                 31-Dec-1992 #sequence_revision 31-Dec-1992 #text_change
                   26-Apr-1996
ACCESSIONS       A40566
REFERENCE        A40566
   #authors      Upton, C.; Macen, J.L.; Schreiber, M.; Mcfadden, G.
   #journal      Virology (1991) 184:370-382
   #title        Myxoma virus expresses a secreted protein with homology to
                   the tumor necrosis factor receptor gene family that
                   contributes to viral virulence.
   #cross-references MUID:91335768
   #accession    A40566
      ##molecule_type DNA
      ##residues      1-326 ##label UPT
      ##cross-references GB:M37976
CLASSIFICATION   #superfamily myxoma virus T2 protein; NGF receptor repeat
                   homology
KEYWORDS         glycoprotein
FEATURE
   64-105            #domain NGF receptor repeat homology #label NG2\
   106-147           #domain NGF receptor repeat homology #label NG3\
   66,181,205,238    #binding_site carbohydrate (Asn) (covalent) #status
                       predicted
SUMMARY          #length 326  #molecular-weight 35208  #checksum 9255

  Query Match           9.4%;  Score 269;  DB 2;  Length 326;
  Best Local Similarity  33.8%;  Pred. No. 4.86e-25;
  Matches    47;  Conservative   25;  Mismatches  58;  Indels   9;  Gaps   8;

Db      40 ctscppgsyasrlcgpgsdtvcspcknetftastnhapacvscrgrctghlsesqscdkt 99
           |  ||||:|  : | :   |||:|| : :| | : :  |: |   |       | |::|
Qy      41 CDKCPPGTYLKQHCTAKWKTVCAPCPDHYYTDSWHTSDECLYCSPVCKELQYVKQECNRT 100

Db     100 rdrvcdcsagnycllkgqegcricapktkcpagygvs-ghtrtgdvlctkcprytysdav 158
           ::|||:|  | |  |   | | :   :: ||:|:||  : |   : :| :||   :|:
Qy     101 HNRVCECKEGRY--LE-IEFC-L-KHRS-CPPGFGVVQAGTPERNTVCKRCPDGFFSNET 154

Db     159 sstetctssfnyisvefnl 177
           ||   |    |  || | |
Qy     155 SSKAPCRKHTNC-SV-FGL 171


RESULT    8
ENTRY            B43692     #type complete
TITLE            T2 protein - rabbit fibroma virus
ORGANISM         #formal_name rabbit fibroma virus, Shope fibroma virus
DATE             30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change
                   26-Apr-1996
ACCESSIONS       B43692
REFERENCE        A43692
   #authors      Upton, C.; DeLange, A.M.; McFadden, G.
   #journal      Virology (1987) 160:20-30
   #title        Tumorigenic poxviruses: genomic organization and DNA sequence
                   of the telomeric region of the Shope fibroma virus genome.
   #accession    B43692
      ##status        preliminary
      ##molecule_type DNA
      ##residues      1-325 ##label UPT
      ##cross-references GB:M17433
CLASSIFICATION   #superfamily NGF receptor repeat homology
FEATURE
   64-105            #domain NGF receptor repeat homology #label NG2\
   106-147           #domain NGF receptor repeat homology #label NG3
SUMMARY          #length 325  #molecular-weight 35132  #checksum 4629

  Query Match           9.1%;  Score 260;  DB 6;  Length 325;
  Best Local Similarity  30.5%;  Pred. No. 1.41e-23;
  Matches    51;  Conservative   31;  Mismatches  77;  Indels   8;  Gaps   5;

Db      40 caschpgfyasrlcgpgsntvcspcedgtftastnhapacvscrgpctghlsesqpcdrt 99
           |  | || |  : | :  :|||:|| |  :| | : :  |: |   |       | |:||
Qy      41 CDKCPPGTYLKQHCTAKWKTVCAPCPDHYYTDSWHTSDECLYCSPVCKELQYVKQECNRT 100

Db     100 hdrvcncstgnycllkgqngcricapqtkcpagygvs-ghtragdtlcekcpphtysdsl 158
           |:|||:|  | |  |  :    :|  :  ||:|:||  : |   :|:| :||   :|:
Qy     101 HNRVCECKEGRY--L--EIE--FCLKHRSCPPGFGVVQAGTPERNTVCKRCPDGFFSNET 154

Db     159 sptercgtsfnyisvgfnlypvnetscttt-aghneviktkeftvtl 204
           |:   |    |    |: |    :::     :|::|      : |||
Qy     155 SSKAPCRKHTNCSVFGLLLTQKGNATHDNICSGNSESTQKCGIDVTL 201


RESULT    9
ENTRY            I54182     #type complete
TITLE            tumor necrosis factor receptor 2-related protein - human
ORGANISM         #formal_name Homo sapiens #common_name man
DATE             24-May-1996 #sequence_revision 24-May-1996 #text_change
                   24-May-1996
ACCESSIONS       I54182
REFERENCE        I54182
   #authors      Baens, M.; Chaffanet, M.; Cassiman, J.J.; Van den Berghe, H.;
                   Marynen, P.
   #journal      Genomics (1993) 16:214-218
   #title        Construction and evaluation of a hncDNA library of human 12p
                   transcribed sequences derived from a somatic cell hybrid.
   #cross-references MUID:93252381
   #accession    I54182
      ##status        preliminary; translated from GB/EMBL/DDBJ
```

```
      ##molecule_type mRNA
      ##residues      1-435 ##label RES
      ##cross-references GB:L04270; NID:g339761; CDS_PID:g339762
SUMMARY           #length 435  #molecular-weight 46709  #checksum 63

  Query Match             9.1%;  Score 260;  DB 13;  Length 435;
  Best Local Similarity  32.3%;  Pred. No. 1.41e-23;
  Matches    52;  Conservative   23;  Mismatches  75;  Indels  11;  Gaps   6;

Db      52 epqhriccsrcppgtyvsakcsrirdtvcatcaensynehwnylticqlcrpcdpv-mgl 110
           |  |:: | :|||||||:   |:  : |||| |::: | : |:    | |   | || : |
Qy      34 ETSHQLLCDKCPPGTYLKQHCTAKWKTVCAPCPDHYYTDSWHTSDEC-LY--CSPVCKEL 90

Db     111 eeiap-ctskrktqcrcqpgmfcaawalecthcellsdcppgteaelkdevgkgnnhcvp 169
           : :   |   ::  | |  | :     ||   |     ||||    :        |  |
Qy      91 QYVKQECNRTHNRVCECKEGRY-----LEIEFCLKHRSCPPGFGV-VQAGTPERNTVCKR 144

Db     170 ckaghfqntsspsarcqphtrcenqglveaapgtaqsdttc 210
           |  | | | :|: | |: || |   ||: :  | | |  |
       145 CPDGFFSNETSSKAPCRKHTNCSVFGLLLTQKGNATHDNIC 185


RESULT   10
ENTRY             S32385      #type fragment
TITLE             gene G4R protein - variola virus (fragment)
ORGANISM          #formal_name Variola virus
DATE              22-Nov-1993 #sequence_revision 22-Nov-1993 #text_change
                    22-Nov-1993
ACCESSIONS        S32385
REFERENCE         S32385
   #authors       Shchelkunov, S.N.; Blinov, V.M.; Sandakhchiev, L.S.
   #journal       FEBS Lett. (1993) 319:80-83
   #title         Genes of variola and vaccinia viruses necessary to overcome
                    the host protective mechanisms.
   #accession     S32385
      ##status         preliminary
      ##residues       1-138 ##label SHC
      ##cross-references EMBL:X69198
SUMMARY           #length 138  #checksum 6036

  Query Match             8.0%;  Score 230;  DB 16;  Length 138;
  Best Local Similarity  35.4%;  Pred. No. 8.98e-19;
  Matches    46;  Conservative   19;  Mismatches  58;  Indels   7;  Gaps   4;

Db      10 hnlcclscppgtyasrlcdsktntqctpcgsgtftsrnnhlpaclscngrcnsnqvetrs 69
           | | |  ||||||   : | :| :| |:||    :|   :    || |:  |:  |   :
Qy      37 HQLLCDKCPPGTYLKQHCTAKWKTVCAPCPDHYYTDSWHTSDECLYCSPVCKELQYVKQE 96

       70 cntthnricecspgyycllkgssgckacvsqtkcgigygvs-ghtsvgdvicspcgfgty 128
          || ||||:|||  | |  |          |: :  |  |:||  : |:  : :|  |  | :
Qy      97 CNRTHNRVCECKEGRY--LE--IE--FCLKHRSCPPGFGVVQAGTPERNTVCKRCPDGFF 150

Db     129 shtvssadkc 138
           |:  ||   |
Qy     151 SNETSSKAPC 160


RESULT   11
ENTRY             D36858      #type complete
TITLE             G4R protein - variola virus
ALTERNATE_NAMES   B28R protein (COP)
ORGANISM          #formal_name variola virus
DATE              30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change
                    15-Nov-1996
ACCESSIONS        D36858; S46888; S35987
REFERENCE         A36859
   #authors       Blinov, V.M.
   #submission    submitted to GenBank, November 1992
   #description   not shown.
   #accession     D36858
      ##status         preliminary
      ##molecule_type DNA
      ##residues       1-349 ##label BLI
      ##cross-references GB:X69198
      ##experimental_source strain India-1967, ssp. major, isolate Ind3
REFERENCE         S46868
   #authors       Kolykhalov, A.A.; Blinov, V.M.; Gytorov, V.V.; Pozdnyakov,
                    S.G.; Chizhikov, V.E.; Frolov, I.V.; Totmenin, A.V.;
                    Shchelkunov, S.N.; Sandakhchiev, L.S.
   #submission    submitted to the EMBL Data Library, April 1992
   #description   Nucleotide sequence analysis of the region of variola virus
                    XhoI F O H P Q genome fragment.
   #accession     S46888
      ##status         preliminary
      ##molecule_type DNA
      ##residues       1-349 ##label KOL
      ##cross-references EMBL:X67117
      ##experimental_source strain India-1967, isolate Ind3
CLASSIFICATION    #superfamily NGF receptor repeat homology
FEATURE
   68-109              #domain NGF receptor repeat homology #label NG2\
   110-151             #domain NGF receptor repeat homology #label NG3
SUMMARY           #length 349  #molecular-weight 38189  #checksum 2016

  Query Match             8.0%;  Score 230;  DB 8;  Length 349;
  Best Local Similarity  35.4%;  Pred. No. 8.98e-19;
  Matches    46;  Conservative   19;  Mismatches  58;  Indels   7;  Gaps   4;

Db      40 hnlcclscppgtyasrlcdsktntqctpcgsgtftsrnnhlpaclscngrcnsnqvetrs 99
           | | |  ||||||   : | :| :| |:||    :|   :    || |:  |:  |   :
Qy      37 HQLLCDKCPPGTYLKQHCTAKWKTVCAPCPDHYYTDSWHTSDECLYCSPVCKELQYVKQE 96

Db     100 cntthnricecspgyycllkgssgckacvsqtkcgigygvs-ghtsvgdvicspcgfgty 158
           || ||||:|||  | |  |          |: :  |  |:||  : |:  : :|  |  | :
Qy      97 CNRTHNRVCECKEGRY--LE--IE--FCLKHRSCPPGFGVVQAGTPERNTVCKRCPDGFF 150

Db     159 shtvssadkc 168
           |:  ||   |
Qy     151 SNETSSKAPC 160


RESULT   12
ENTRY             I57826      #type complete
TITLE             tumor necrosis factor receptor - mouse
ORGANISM          #formal_name Mus musculus #common_name house mouse
DATE              02-Aug-1996 #sequence_revision 02-Aug-1996 #text_change
                    02-Aug-1996
ACCESSIONS        I57826
REFERENCE         I57826
   #authors       Rothe, J.G.; Bluethmann, H.; Gentz, R.; Lesslauer, W.;
                    Steinmetz, M.
   #journal       Mol. Immunol. (1993) 30:165-176
   #title         Genomic organization and promoter function of the murine
                    tumor necrosis factor receptor beta gene.
   #cross-references MUID:93156721
   #accession     I57826
      ##status         preliminary; translated from GB/EMBL/DDBJ
      ##molecule_type DNA
      ##residues       1-454 ##label RES
      ##cross-references GB:M76656; NID:g202100; CDS_PID:g202102
GENETICS
   #introns       13/3; 65/1; 108/1; 158/1; 184/2; 210/1; 248/1; 257/3; 353/1
   #note          gene name TNFR-2
SUMMARY           #length 454  #molecular-weight 50030  #checksum 4267

  Query Match             7.7%;  Score 221;  DB 14;  Length 454;
  Best Local Similarity  33.1%;  Pred. No. 2.33e-17;
  Matches    48;  Conservative   21;  Mismatches  65;  Indels  11;  Gaps   9;

Db      49 yvhsknnsicctkchkgtylvsdcpspgrdtvcrecekgtftasqnylrqclscktcrke 108
           |    :: : | ||  ||||    | :  : |||  |    :| | :   :|| |    ||
Qy      31 YDEETSHQLLCDKCPPGTYLKQHCTAK-WKTVCAPCPDHYYTDSWHTSDECLYCSPVCKE 89

Db     109 msqveispcqadkdtvcgckenqfqrylsethfqcvdcspcfng-tvtipcketqntvcn 167
           :  |    |    : || |||    ||| |  | |:   :|  |  |  :    :||||:
Qy      90 LQYVK-QECNRTHNRVCECKEG---RYL-EIEF-CLKHRSCPPGFGVVQAGTPERNTVCK 143
```

```
Db    168 -chagfflresecvpcshckkneec 191
          |  |||  |:   : : |:|: :|
Qy    144 RCPDGFFSNETSSKA-P-CRKHTNC 166
```

```
RESULT   13
ENTRY            GQMST1     #type complete
TITLE            tumor necrosis factor receptor type 1 precursor - mouse
ALTERNATE_NAMES  tumor necrosis factor receptor, 55K
ORGANISM         #formal_name Mus musculus #common_name house mouse
DATE             30-Jun-1992 #sequence_revision 30-Jun-1992 #text_change
                   18-Oct-1996
ACCESSIONS       A38634; B40254; S16677; S19021; I54532
REFERENCE        A38634
   #authors      Lewis, M.; Tartaglia, L.A.; Lee, A.; Bennett, G.L.; Rice,
                   G.C.; Wong, G.H.W.; Chen, E.Y.; Goeddel, D.V.
   #journal      Proc. Natl. Acad. Sci. U.S.A. (1991) 88:2830-2834
   #title        Cloning and expression of cDNAs for two distinct murine tumor
                   necrosis factor receptors demonstrate one receptor is
                   species specific.
   #cross-references MUID:91187885
   #accession    A38634
      ##molecule_type mRNA
      ##residues      1-454 ##label LEW
      ##cross-references GB:M60468
REFERENCE        A40254
   #authors      Goodwin, R.G.; Anderson, D.; Jerzy, R.; Davis, T.; Brannan,
                   C.I.; Copeland, N.G.; Jenkins, N.A.; Smith, C.A.
   #journal      Mol. Cell. Biol. (1991) 11:3020-3026
   #title        Molecular cloning and expression of the type 1 and type 2
                   murine receptors for tumor necrosis factor.
   #cross-references MUID:91246168
   #accession    B40254
      ##molecule_type mRNA
      ##residues      1-454 ##label GO2
      ##cross-references GB:M60468
REFERENCE        S16677
   #authors      Barrett, K.; Taylor-Fishwick, D.A.; Cope, A.P.; Kissonerghis,
                   A.M.; Gray, P.W.; Feldmann, M.; Foxwell, B.M.J.
   #journal      Eur. J. Immunol. (1991) 21:1649-1656
   #title        Cloning, expression and cross-linking analysis of the murine
                   p55 tumor necrosis factor receptor.
   #cross-references MUID:91285014
   #accession    S16677
      ##molecule_type mRNA
      ##residues      1-454 ##label BAR
      ##cross-references EMBL:X59238
REFERENCE        S19021
   #authors      Rothe, J.G.; Brockhaus, M.; Gentz, R.; Lesslauer, W.
   #journal      Immunogenetics (1991) 34:338-340
   #title        Molecular cloning and expression of the mouse Tnf receptor
                   type b.
   #cross-references MUID:92039815
   #accession    S19021
      ##molecule_type mRNA
      ##residues      1-454 ##label ROT
      ##cross-references EMBL:X57796
REFERENCE        I54532
   #authors      Bebo, B.F.
   #journal      Immunogenetics (1994) 39:450-451
   #title        Nucleotide sequence of the TNF type I receptor from a mouse
                   endothelioma cell line.
   #cross-references MUID:94245292
   #accession    I54532
      ##status        translated from GB/EMBL/DDBJ
      ##molecule_type mRNA
      ##residues      1-454 ##label RES
      ##cross-references GB:L26349; NID:g430732; CDS_PID:g430733
COMMENT     This protein is one of two distantly related receptors for both
              TNF-alpha (cachectin) and TNF-beta (lymphotoxin).
CLASSIFICATION   #superfamily tumor necrosis factor receptor type 1; NGF
                   receptor repeat homology
KEYWORDS         duplication; glycoprotein; receptor; transmembrane protein
FEATURE
   1-29               #domain signal sequence #status predicted #label SIG\
   30-454             #product tumor necrosis factor receptor type 1 #status
                        predicted #label MAT\
   30-212             #domain extracellular #status predicted #label EXT\
   44-82              #domain NGF receptor repeat homology #label NG1\
   84-126             #domain NGF receptor repeat homology #label NG2\
   127-167            #domain NGF receptor repeat homology #label NG3\
   168-204            #domain NGF receptor repeat homology #label NG4\
   213-235            #domain transmembrane #status predicted #label MEM\
   236-454            #domain intracellular #status predicted #label INT
SUMMARY          #length 454  #molecular-weight 50129  #checksum 4839

  Query Match            7.7%;  Score 221;  DB 2;  Length 454;
  Best Local Similarity  33.1%;  Pred. No. 2.33e-17;
  Matches    48;  Conservative   21;  Mismatches  65;  Indels  11;  Gaps   9;

Db     49 yvhsknnsicctkchkgtylvsdcpspgrdtvcrecekgtftasqnylrqclscktcrke 108
          |    :: : | ||  |||   | :  : |||  |    :| | :   :|| |    ||
Qy     31 YDEETSHQLLCDKCPPGTYLKQHCTAK-WKTVCAPCPDHYYTDSWHTSDECLYCSPVCKE 89

Db    109 msqveispcqadkdtvcgckenqfqrylsethfqcvdcspcfng-tvtipcketqntvcn 167
          : |    |    : || |||    ||| |  | |:   :|  |  |  :    :||||:
Qy     90 LQYVK-QECNRTHNRVCECKEG---RYL-EIEF-CLKHRSCPPGFGVVQAGTPERNTVCK 143

Db    168 -chagfflresecvpcshckkneec 191
           |  |||  |:   : : |:|: :|
Qy    144 RCPDGFFSNETSSKA-P-CRKHTNC 166
```

```
RESULT   14
ENTRY            GQRTT1     #type complete
TITLE            tumor necrosis factor receptor type 1 precursor - rat
CONTAINS         tumor necrosis factor binding protein 1 (TNF blocking factor)
ORGANISM         #formal_name Rattus norvegicus #common_name Norway rat
DATE             30-Jun-1992 #sequence_revision 07-Oct-1994 #text_change
                   05-Apr-1995
ACCESSIONS       B36555
REFERENCE        A36555
   #authors      Himmler, A.; Maurer-Fogy, I.; Kroenke, M.; Scheurich, P.;
                   Pfizenmaier, K.; Lantz, M.; Olsson, I.; Hauptmann, R.;
                   Stratowa, C.; Adolf, G.R.
   #journal      DNA Cell Biol. (1990) 9:705-715
   #title        Molecular cloning and expression of human and rat tumor
                   necrosis factor receptor chain (p60) and its soluble
                   derivative, tumor necrosis factor-binding protein.
   #cross-references MUID:91090841
   #accession    B36555
      ##molecule_type mRNA
      ##residues      1-461 ##label HIM
      ##cross-references GB:M63122
COMMENT     This protein is one of two known receptors for both TNF-alpha
              (cachectin) and TNF-beta (lymphotoxin).
CLASSIFICATION   #superfamily tumor necrosis factor receptor type 1; NGF
                   receptor repeat homology
KEYWORDS         duplication; glycoprotein; receptor; transmembrane protein
FEATURE
   1-29               #domain signal sequence #status predicted #label SIG\
   30-461             #product tumor necrosis factor receptor type 1 #status
                        predicted #label MAT\
   30-211             #domain extracellular #status predicted #label EXT\
   30-201             #product tumor necrosis factor binding protein #status
                        predicted #label TBP\
   44-82              #domain NGF receptor repeat homology #label NG1\
   84-126             #domain NGF receptor repeat homology #label NG2\
   127-167            #domain NGF receptor repeat homology #label NG3\
   168-204            #domain NGF receptor repeat homology #label NG4\
   212-234            #domain transmembrane #status predicted #label MEM\
   235-461            #domain intracellular #status predicted #label INT\
   54,151,201         #binding_site carbohydrate (Asn) (covalent) #status
                        predicted
SUMMARY          #length 461  #molecular-weight 50969  #checksum 1617
```

```
  Query Match             7.7%;  Score 220;  DB 2;  Length 461;
  Best Local Similarity  33.8%;  Pred. No. 3.34e-17;
  Matches    49;  Conservative   22;  Mismatches  63;  Indels  11;  Gaps  10;

Db      49 yahpknnsicctkchkgtylvsdcpspgqetvcevcdkgtftasqnhvrqclscktcrke 108
           |    :: : | ||  |||| | :   ||| |   :| | :  :|| |    ||
Qy      31 YDEETSHQLLCDKCPPGTYLKQHCTAK-WKTVCAPCPDHYYTDSWHTSDECLYCSPVCKE 89

Db     109 mfqveispckadmdtvcgckknqfqrylsethfqcvdcspcfng-tvtipckekqntvcn 167
           : |     |:   : || ||  :  ||| |  | |:   :|  |  |  :    :||||:
Qy      90 L-QYVKQECNRTHNRVCECK--E-GRYL-EIEF-CLKHRSCPPGFGVVQAGTPERNTVCK 143

Db     168 -chagfflsgnectpcshckknqec 191
            |  ||| | || :: : |:|: :|
Qy     144 RCPDGFF-S-NETSSKAPCRKHTNC 166


RESULT  15
ENTRY           JN0006     #type complete
TITLE           nerve growth factor receptor, low affinity - chicken
ALTERNATE_NAMES NGF receptor
ORGANISM        #formal_name Gallus gallus #common_name chicken
DATE            07-Jun-1990 #sequence_revision 07-Jun-1990 #text_change
                  05-Apr-1995
ACCESSIONS      JN0006; A60504
REFERENCE       JN0006
  #authors      Large, T.H.; Weskamp, G.; Helder, J.C.; Radeke, M.J.; Misko,
                  T.P.; Shooter, E.M.; Reichardt, L.F.
  #journal      Neuron (1989) 2:1123-1134
  #title        Structure and developmental expression of the nerve growth
                  factor receptor in the chicken central nervous system.
  #cross-references MUID:90166579
  #accession    JN0006
    ##molecule_type mRNA
    ##residues      1-416 ##label LAR
    ##experimental_source embryonic chick brain
REFERENCE       A60504
  #authors      Heuer, J.G.; Fatemie-Nainie, S.; Wheeler, E.F.; Bothwell, M.
  #journal      Dev. Biol. (1990) 137:287-304
  #title        Structure and developmental expression of the chicken NGF
                  receptor.
  #accession    A60504
    ##status         preliminary; not compared with conceptual translation
    ##molecule_type mRNA
    ##residues      21-35,'Y',37-172,'K',174-275,'S',277-395,'R',397-416
                      ##label HEU
COMMENT     This receptor is found on sensory and sympathetic neurons, on
              neuroblastoma cells, and on a variety of nonneuronal derivatives
              of the neural crest.
COMMENT     The cysteine-rich region of the extracellular domain may form part
              or all of the NGF-binding site.
COMMENT     This protein is thought to form a high-affinity receptor when it
              associates with the 140K trk proto-oncogene, which contains an
              intracellular tyrosine kinase domain.
CLASSIFICATION  #superfamily nerve growth factor receptor; NGF receptor
                  repeat homology
KEYWORDS        duplication; glycoprotein; heterodimer; monomer;
                  phosphoprotein; receptor; transmembrane protein
FEATURE
  1-20              #domain signal sequence #status predicted #label SIG\
  21-416            #product nerve growth factor receptor #status predicted
                      #label MAT\
  21-239            #domain extracellular #status predicted #label EXT\
  21-182            #region cysteine-rich\
  24-57             #domain NGF receptor repeat homology #label NG1\
  59-100            #domain NGF receptor repeat homology #label NG2\
  101-139           #domain NGF receptor repeat homology #label NG3\
  141-181           #domain NGF receptor repeat homology #label NG4\
  189-237           #region serine/threonine-rich\
  240-261           #domain transmembrane #status predicted #label MEM\
  262-416           #domain intracellular #status predicted #label INT\
  52                #binding_site carbohydrate (Asn) (covalent) #status
                                predicted
SUMMARY         #length 416  #molecular-weight 44654  #checksum 3542

  Query Match             7.5%;  Score 215;  DB 6;  Length 416;
  Best Local Similarity  30.4%;  Pred. No. 2.01e-16;
  Matches    45;  Conservative   27;  Mismatches  70;  Indels   6;  Gaps   6;

Db      36 ckacnlgegvvqpcgvn-qtvcepcldsvtysdtvsatepckpctq-cvglhsmsapcve 93
           |  |  |  : | |  :  ||| || |   |:|:  ::: |  |:  |  |: :   |
Qy      41 CDKCPPGTYLKQHCTAKWKTVCAPCPDHY-YTDSWHTSDECLYCSPVCKELQYVKQECNR 99

Db      94 sddavcrcaygyfqdelsgsckecsicevgfglmfpcrdsqdtvceecpegtfsdeanfv 153
           : : || |  | :  |:   |     |  |||:: :    ::||| ||:| ||:|::
Qy     100 THNRVCECKEGRYL-EIE-FCLKHRSCPPGFGVVQAGTPERNTVCKRCPDGFFSNETSSK 157

Db     154 dpclpcticeenevmvke-ctatsdaec 180
            ||   | |    ::: :   || |  |
Qy     158 APCRKHTNCSVFGLLLTQKGNATHDNIC 185


Search completed: Wed Aug 20 09:53:47 1997
Job time : 60 secs.
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